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ABSTRACT

In two experiments employing female and male subjects, respectively, social reactions to "success" were manipulated in an attempt to assess the validity of Horner's Fear-of-Success (FOS) concept as a motivational construct. The use of a single-criterion, dichotomous scoring procedure on a fantasy-based measure of the construct produced moderate to high inter-scorer reliabilities. Although there was only a modest sex difference in the overall level of FOS motivation, significant effects of social reaction were observed in both sexes. The FOS construct appears to have experimental validity when the social conditions sufficient for its arousal are established. The results also raise the possibility that FOS motivation may be a highly situational phenomenon. (Author)

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Experimental Induction of Fear of Success Fantasies: Partial Validation of Horner's Construct

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Experimental Induction of Fear of Success Fantasies: Partial Validation of Horner's Construct

Using a projective-testing technique, similar in rationale to those of McClelland, Clark, Roby, and Atkinson (1949), Horner (1968) claimed to have discovered a "motive to avoid success," hereafter referred to as "fear of success" (FOS). Horner (1972a) has stated that FOS "exists and receives its impetus from the expectancy held by most women that success, especially in competitive achievement situations, will be followed by negative consequence for them. Among these are social rejection and feelings of being unfeminine or inadequate as a woman" (p. 62, italics ours). Thus, FOS motivation was held to be a learned expectancy that is aroused by specific circumstances and more commonly found in women than in men. The principal means of measuring FOS motivation has been to present subjects with a presumably provocative verbal cue such as "After the first-term finals Anne (John) finds herself (himself) at the top of her (his) medical school class," and, then, to have them write a story about the cue. Subjects are assigned FOS points for any written statements showing: "the presence or anticipation of negative consequence or affect because of the success," "any direct or indirect expression of conflict about the success," "denial of effort or responsibility for attaining the success," or "bizarre or inappropriate responses to the cue" (Horner, 1972b).

In spite of the initially widespread interest in and acceptance of Horner's findings and conclusions, several poignant criticisms have been aimed at this line of research (Tresemer, 1974; Zuckerman & Wheeler, 1975). Of the numerous criticisms, the present paper adresses the following four:

1. the absence of data showing that FOS fantasies can be experimentally induced in the same way that other fantasy-based motivational states are aroused,
2. the ambiguity regarding what specific conditions should activate FOS motivation,
3. low reliability coefficients for most fantasy-based FOS measures, and
4. the question of whether there are reliable sex differences in the incidence of FOS fantasies.

A major problem with Horner's research is that she neglected to validate her measure of the FOS construct (Tresemer, 1974). In classic studies of motive assessment via projective tests (e.g., McClelland et al., 1949; McClelland, Atkinson, Clark, & Lowell, 1953), the motive in question was first aroused to several different levels of intensity through manipulation of the salience of cues or consequences presumed to underlie the motive. Then subjects at each level of arousal were given ambiguous stimuli and asked to write a story about each stimulus. If the more highly aroused subjects produced more motive-

related fantasy in their stories than the less highly aroused subjects, the projective technique was deemed a valid measure of the motive. This basic experimental validation would seem to be a critical prerequisite to more advanced theoretical investigation of a fantasy-based motivational construct (cf. Cofer & Appley, 1964, p. 715), and yet, has been conspicuously absent in the FOS literature. Consequently, the studies reported here were designed to assess the incidence of FOS imagery as a function of level of motive arousal.

Even though the sufficient conditions for FOS arousal have never been explicitly defined, several researchers (e.g., Feather & Simon, 1973; Heilbrun, Kleemeier & Piccola, 1974) have assumed that FOS arousal is a function of such variables as competitiveness of a task, sex of partner in a competitive task, and sex-role orientation among female subjects. These researchers, however, failed to check the validity of their motive-arousal manipulation, and their results have presented a confusing picture of the effects of the sundry conditions assumed to evoke FOS (Zuckerman & Wheeler, 1975).

For the purpose of varying FOS arousal in the present studies, we chose to manipulate the two consequences that, according to Horner, females expect to accompany success: social rejection and perceived loss of adequacy as a woman (or man, in the case of our second experiment).

Manipulation of these consequences was accomplished through the contrived reactions of an experimental accomplice who "competed" against our subjects in the ostensible experimental task. This rationale was in line with that of validation studies of achievement motivation (McClelland et al, 1949) and rested on the assumption that FOS motivation would be most sensitive to social cues that either reaffirm or disconfirm learned expectations regarding the consequences of success.

Fantasy-based measures of FOS motivation have been indicted for both mediocre test-retest reliability and questionable interscorer reliability. While we did not take up the question of test-retest reliability, we did assess and attempt to maximize inter-scorer reliability. Tresemer (1974) asserted that a likely cause of questionable reliability in projective tests of FOS is the use of several questionable cirteria in the assignment of FOS scores to subjects' response protocols (see Horner, 1968; 1972b). He suggested that the only defensible FOS criteria are those pertaining to the negative consequences of success and further suggested that reliabilities might be enhanced by coding FOS scores only along the negative-consequences-of-success dimension. Accordingly, we scored protocols for the presence of FOS imagery only if they contained reference to direct or indirect negative consequences of success. Also for the purpose of reducing ambiguity in the scoring process, we simply dichotomized each protocol as to the presence or

absence of FOS fantasies and did not attempt to differentiate gradations of FOS imagery within the relatively small samples of fantasy obtained in response to our single cue.

Finally, to consider possible sex differences in (a) overall level of FOS motivation and (b) susceptibility to FOS induction, we conducted separate experiments using male and female subjects, respectively.

Experiment I

Female subjects were exposed to one of two levels of social rejection in an achievement situation, and, subsequently, their stories written in response to an ambiguous verbal stimulus were scored for the presence of FOS fantasy.

Method

Subjects. The experiment was informally advertised at The Lindenwood Colleges until 32 female volunteers had been obtained from the undergraduate population. Subjects ranged in age from 18 to 23. "Helping the psychological researchers" was the only incentive offered to the volunteers. Only persons who had never been in an experiment of this kind were employed. Subjects were randomly assigned to one of two groups: the High-Arousal group or the Low-Arousal group. Random assignment was accomplished by flipping a coin, subject to the constraint that not more than 16 subjects could serve in each arousal condition.

Materials: Two, five-word anagram tests were constructed from common four-letter nouns. These tests were introduced as measures of "verbal ability" and served as cover tasks in the induction of high or low motive arousal.

A final task, introduced as a test of creative-writing ability, consisted of having subjects write a story in response to the verbal cue, "After many long years of study and work, Mary has finally achieved national recognition in her profession." Subjects' themes were guided by the following written prompts: "What is happening?" "Who are the persons?" "What led up to this situation; that is, what happened in the past?" "What is being thought?" "What is wanted; by whom?" "What will happen?" "What will be done?" We purposely avoided attaching Mary's success to a particular profession, in order to avert the confounding of sex of character and "sex appropriateness" of the field of accomplishment that has been criticized in earlier papers (cf. Zuckerman & Wheeler, 1975).

Setting and procedure. Each subject was led into a large room containing a rectangular table, with two chairs side-by-side at the middle portion of one long side of the table and a third chair at one end of the table. After the subject was seated in one of the side-by-side chairs, the male confederate of the experimenter, posing as a tardy, second subject, rushed in and immediately apologized for being late. He then sat in the chair next to the actual subject. Importantly, the confederate established and maintained close physical proximity and fairly constant eye contact with the subject.

At this point the experimenter explained that she apparently was out of anagram tests and must leave for a moment to obtain

additional ones. After the experimenter departed, the confederate began attempting to establish a positive relationship with the subject by maintaining a pleasant demeanor and eye contact while asking the subject about herself (hometown, major, whether she had been in other experiments, etc.). After two minutes had elapsed, the experimenter returned to the room clutching several anagram sheets and began explaining the experiment to the "subjects."

The experimenter told the "subjects" that she was interested in finding out whether there is a correlation between scores on the anagram test, a measure of verbal ability, and aptitude for creative writing. The nature of the anagram tests was then explained, and the "subjects" were apprised of the fact that they would receive two such tests, each being one minute long, and would then take a creative writing test. At this time, the experimenter answered any questions the "subjects" had and asked them to sign consent forms.

One minute was allowed for completion of the first anagram test. The anagrams were simple enough that the actual subject always unscrambled all five of them in the correct fashion. The confederate, however, feigned incompetence by completing only two or three. After collecting the anagram sheets and looking them over, the experimenter casually commented to the actual subject, "(Subject's first name), you got all of them right!"

At this point the confederate's reaction varied, depending on whether the subject had been assigned to the High-Arousal or the Low-Arousal level of the independent variable:

HIGH-AROUSAL GROUP: Upon hearing the experimenter's comment to the subject, the confederate muttered (toward the experimenter, completely ignoring the subject), "What the hell, does she take a dictionary on her dates?" The experimenter laughed nervously. (Note that this reaction was designed to engender feelings of inadequacy as a woman, a putative root of FOS motivation).

LOW-AROUSAL GROUP: Upon hearing the experimenter's comment to the subject, the confederate made eye contact with the actual subject, smiled with admiration, and said, "That was really great!" and jokingly added, "I'll let you do my next test, so I can get mine right!"

The second anagram test was then administered with similar results, and the experimenter again complimented the actual subject on her performance. Again, the confederate's reaction varied according to the subject's experimental condition.

HIGH-AROUSAL GROUP: The confederate said nothing this time; he only stared "into space" with a disgusted look on his face.

LOW-AROUSAL GROUP: The confederate exclaimed with admiration, "That's great! You ought to show me how to do better."

Next the experimenter told the "subjects" that, as a test of creative writing ability, they would be given a single

sentence, about which they must write a one-page story. They were also told that their stories should respond to the several questions about the stimulus sentence that appeared on the response sheet.

HIGH-AROUSAL GROUP: The confederate asked if he could move to the chair at the end of the table to write his story. (This reaction was designed to create feelings of rejection, another supposed source of FOS motivation.) The experimenter granted permission, and the confederate relocated.

LOW-AROUSAL GROUP: The confederate turned toward the actual subject and commented, "Sounds interesting!"

The response sheet containing both the verbal cue and the prompting questions was distributed to the "subjects," and they were afforded as much time as they needed to compose their stories.

When the actual subject finished and submitted her story, both the experimenter and the confederate began debriefing her. The purpose and implications of the study were described, and, if the subject was in the High-Arousal condition, she was reassured that the confederate's actions had been merely a part of the experimental manipulation and were in no way a reflection of his real opinion of her. The experimenter also offered to answer any other questions the subject might have. She was then thanked for her interest and cooperation, asked to not reveal the nature of the experiment to other students,

and dismissed with further thanks.

Scoring and Analysis. Two of the authors independently scored each response protocol for the presence or absence of FOS imagery, defined as "statements showing negative consequences as a result of success." Scoring was "blind", in the sense that neither scorer knew which level of the independent variable was represented by a given protocol. After all stories had been coded for FOS, the two scorers consulted with one another to resolve any scoring disagreements. Data were tested for statistical significance via the phi coefficient (Nunnally, 1967), which is a direct derivative of the Pearson product-moment correlation for use with dichotomously scored data. Thus, the phi coefficient may be interpreted in the same fashion as the Pearson r. The phi coefficient was used in lieu of chi square because the latter statistic relies on a set of strict assumptions (Matheson, Bruce, & Beauchamp, 1974), which were not met by the data of Experiment II. In addition to not being subject to the restrictive assumptions referred to above, the phi coefficient provides an indication of the strength of relationship between two variables, which is not directly shown in chi-square values.

Results

Inter-scorer reliability. The two scorers independently agreed on the scoring of 31 of the 32 response protocols, or in 97% of the cases. A phi coefficient was computed to provide the inter-scorer reliability coefficient: $\phi(30) = .94$.

Consultation between the scorers revealed that the debatable response protocol had been misclassified by one of the scorers as a result of the misreading of a single statement. Thus, the use of dichotomous coding based on Tresemer's suggested criterion for FOS fantasy yielded high inter-scorer reliability in this study.

Insert Table 1 about here.

FOS induction. The results of Experiment I are presented in Table 1. which shows the number of stories manifesting FOS fantasies at each level of motive arousal. Those frequencies are clearly concordant with the hypothesis that FOS motivation can be experimentally induced by the presence of social conditions that, theoretically, give rise to the FOS motive. A correlational analysis of the data indicated that there was a significant relationship between level of motive arousal and the presence of FOS fantasies, ϕ (30) = .45, $p < .05$.

Experiment II

The second experiment was conducted to investigate the extent to which FOS fantasy could be experimentally manipulated in males under conditions similar to those set up in Experiment I.

Method

The experimental design and method were exactly the same as those of Experiment I, with the following exceptions: (a) The experiment was conducted in a high-school setting rather than at a college; (b) the subjects were 32, 18-year

old high-school males (who volunteered to participate in the study); (c) the confederate was a female, a 21-year old college student; (d) the verbal cue in the projective test was changed to read, "After many long years of study and work, Larry has finally achieved national recognition in his profession." As in Experiment I, the experimenter was a female. Of course, it was necessary to reconceptualize one effect of the confederate's reactions as being "perceived loss of adequacy as a man."

Results

Inter-scorer reliability. Two of the authors worked independently to implement the "blind" response-coding technique described in Experiment I. In the case of the male protocols, the scorers independently agreed on the scoring of 27 of the 32 stories, or 84% of the time. The inter-scorer reliability coefficient was correspondingly mediocre, where $\phi(30) = .69$. The most common source of scorer discrepancies resided in the problem of deciding what story outcomes constituted negative consequences of success. One scorer assigned the "presence of FOS fantasy" to stories containing vague or strange outcomes as well as to those containing clearly negative outcomes, whereas the other scorer had used a more conservative criterion whereby only a clear statement of negative consequences was coded for the presence of FOS fantasy. This difficulty had not arisen in the coding of the females' protocols, as all stories in Experiment I had included rather definitive statements of outcome. Even though both methods of scoring led to the

same statistical decision, the data presented in Table 2 are based on the more conservative scoring scheme.

Insert Table 2 about here

FOS induction. As is exhibited in Table 2, the experimental manipulation appears to have resulted in the arousal of FOS motivation in several of the male subjects. The correlation between the independent variable and presence of FOS fantasy was significant, ϕ (30) = .43, $p < .05$, showing that a reliable induction of FOS motivation had occurred in the High-Arousal males. Interestingly, the size of the phi coefficient indicates that the magnitude of FOS induction was essentially the same for the males as it was for the females tested in Experiment I.

Sex differences. Table 3, which combines the data from both experiments irrespective of arousal condition, seems to suggest that the female subjects possessed a moderately higher overall level of FOS motivation than their slightly younger male counterparts. A statistical analysis revealed that the correlation between sex and the incidence of FOS fantasies was significant, $\phi(62) = .28$, $p < .05$.

Insert Table 3 about here.

Of course, this comparison on the factor of sex is questionable, since our female subjects differed from our male subjects on certain environmental variables as well as, to some extent, on the age dimension. Nonetheless, the fact that FOS fantasies

were produced by 41% of the females and only 16% of the males is in line with Horner's (1968) contention that FOS motivation is more frequently found in women than in men.

General Discussion

Our findings support the feasibility and desirability of further FOS research utilizing fantasy-based measures of the construct. This support stems from two aspects of our data. First, both studies indicated that moderate to high inter-scorer reliabilities can be achieved in the use of projective tests of FOS motivation when a clearly defined criterion of FOS fantasy is employed in the coding of response protocols. Moreover, use of the single criterion of negative-consequences-of-success would appear to be the most logical approach to coding FOS imagery, in light Horner's (1968) original conceptualization of the motive. Additional research is still required, however, to determine whether scoring fantasy protocols in this fashion also yields acceptable levels of test-retest reliability that will compare well with those of recently developed objective measures of FOS (see Zuckerman & Wheeler, 1975).

A second aspect of our results that endorses continued use of a fantasy-based approach to FOS research concerns the operational status of FOS as a motive. Tresemer's (1974) most serious criticism of the FOS construct was that it lacks the requisite experimental validation typifying other motivational constructs of this kind. In answer to this

criticism, both of the experiments reported here have demonstrated that it is possible to establish controlled conditions which engender or augment FOS fantasies in both males and females. The effective conditions of arousal appear to be those which reaffirm the negative personal and social consequences that women, in particular, have learned to expect in conjunction with success. These findings constitute only a preliminary step in the validation of Horner's construct, however, since consistent correlations between FOS motivation and other behavioral measures have yet to be found. Our studies should benefit future, theory-building research by helping to reduce confusion and misconceptions regarding the sufficient conditions for arousal of FOS motivation. To date, researchers have assumed that activation of the FOS motive is principally a function of (a) the competitiveness of a socially valued task, (b) the sex of the subjects' competitors in a socially valued task, (c) whether subjects had traditional or modern views of their sex roles, or (d) whether subjects were high or low achievers in a college setting. In contrast, our data strongly suggest that the interpersonal climate surrounding success at a socially valued task is the most important contributor to FOS arousal. A significant implication of this conclusion is that the advent of a competitive situation will have inconsistent effects on FOS activation, depending on attitudes expressed in the immediate

task environment and, perhaps, on the more general social atmosphere of the institutional setting. In short, FOS motivation may be a highly situational phenomenon. If so, the huge discrepancies among reports on the incidence of FOS motivation (Tresemer, 1974; Zuckerman & Wheeler, 1975) become more understandable, inasmuch as that research has been dispersed among diverse institutions with undoubtedly diverse social climates.

Because of certain confoundings mentioned earlier, the significant, though modest, sex difference we found in the frequency of FOS fantasies does not constitute strong evidence for either side of the sex-difference controversy. More important than the question of sex differences, in our view, was the demonstration that FOS motivation can be induced in both males and females under conditions in which negative social sanctions attend success.

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Footnotes

We are grateful for the assistance of Mary McCormick and Barbara Obrect in the collection and scoring of data in Experiment II.

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Table 1

Frequency of Stories Showing the Presence of FOS Fantasy as a Function of Arousal Condition (Females)

	Arousal Condition	
FOS Fantasy	High	Low
Present	10	3
Absent	6	13

Table 2

Frequency of Stories Showing the Presence of FOS Fantasy as a Function of Arousal Condition (Males)

	Arousal Condition	
FOS Fantasy	High	Low
Present	5	0
Absent	11	16

Table 3

Frequency of Stories Showing the Presence of FOS Fantasy as a Function of Sex of Subjects

	Sex of Subjects	
FOS Fantasy	Male	Female
Present	5	13
Absent	27	19

Note: This table combines the frequency data of Experiments I and II irrespective of arousal condition.